

**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-27. (Cancelled)

28. (Previously Presented) A method of utilizing a triggerably releasable delivery system, the method comprising administering to a mucosal membrane of a patient a plurality of nanoparticles containing silica coated with alumina and having a size of about 500 nanometers or less, wherein the alumina provides a site on a surface of the nanoparticles to which is bonded a functional compound, wherein the nanoparticles possess a zeta potential of about 20 millivolts or more, wherein the nanoparticles are contained within a vehicle that further comprises a pH altering material, and wherein the functional compound is released from the surface of the nanoparticles upon exposure to a change in pH.

29. (Cancelled)

30. (Previously Presented) The method of claim 28, wherein the nanoparticles possess a zeta potential of about 30 millivolts or more.

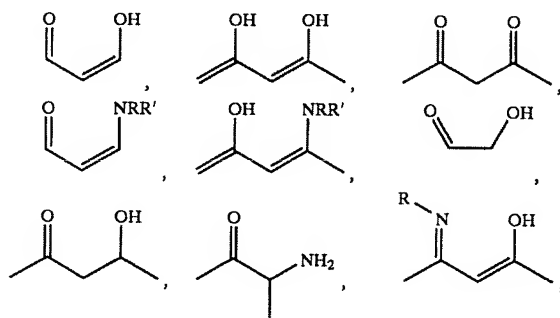
31. (Previously Presented) The method of claim 28, wherein the nanoparticles possess a zeta potential of about 40 millivolts or more.

32. (Cancelled)

33. (Previously Presented) The method of claim 28, wherein the functional compound is an anti-microbial agent, anti-viral agent, or a combination thereof.

34. (Previously Presented) The method of claim 28, wherein the functional compound is a therapeutic agent.

35. (Previously Presented) The method of claim 28, wherein the functional compound contains a moiety comprising:



or a tautomer thereof, or a functional equivalent thereof, wherein R and R' comprise independently hydrogen, an alkyl group, or an aryl group.

36. (Cancelled)

37. (Previously Presented) The method of claim 28, wherein the vehicle is a liquid.

38. (Previously Presented) The method of claim 28, wherein the vehicle is a gel.

39. (Cancelled)

40. (Previously Presented) The method of claim 28, wherein the nanoparticles are located on a substrate prior to administration to the patient.

41. (Cancelled)

42. (Previously Presented) The method of claim 28, wherein the change in pH involves a change from an acidic to an alkaline pH.

43. (Previously Presented) The method of claim 28, wherein the change in pH involves a change from an alkaline to an acidic pH.

44. (Previously Presented) The method of claim 28, wherein the nanoparticles are topically administered.

45. (Cancelled)

46. (Previously Presented) The method of claim 28, wherein the mucosal membrane is located in the vagina of a female.

47-61. (Cancelled)

62. (Previously Presented) The method of claim 28, wherein the pH altering material includes an acid.

63. (Previously Presented) The method of claim 28, wherein the pH altering material includes a base.

64. (Previously Presented) The method of claim 28, wherein the functional compound contains the following moiety:



65. (Previously Presented) The method of claim 64, wherein the functional compound includes tetracycline.

66. (Withdrawn) The method of claim 64, wherein the functional compound includes baicaline hydrate, baicalein, daunorubicin, or a combination thereof.

67. (Withdrawn) The method of claim 64, wherein the functional compound includes salicylanilide, salacetamide, salsalate, albufungin, or a combination thereof.